Am ndments to the Claims

Please amend the claims as indicated below.

1. (Original claim) An apparatus for sensing seismic waves in the earth, the apparatus comprising:

(a) a housing;

(b) one or more seismic sensors disposed in the housing; and

(c) at least one isolator coupled to the one or more seismic sensors for isolating the one or more seismic sensors from high-g shock induced in the housing.

2. (Original claim) The apparatus of claim 1, wherein the at least one isolator is disposed to provide isolation from the induced vibrations in at least one predetermined direction.

3. (Original claim) The apparatus of claim 1 further comprising an electronics package disposed in the housing and wherein the at least one sensor form at least a portion of the electronics package.

4. (Original claim) The apparatus of claim 2, wherein the at least one predetermined direction further comprises directions along three translational axes and three angular axes.

5. (Original claim) The apparatus of claim 1, wherein the at least one isolator further comprises a layer of silicone rubber.

6. (Original claim) The apparatus of claim 1, wherein the at least one isolator further comprises a layer of polyurethane foam.

7. (Original claim) The apparatus of claim 1, wherein the at least one isolator further comprises a first layer of silicone rubber and a second layer of polyurethane foam.

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8. (Original claim) The apparatus of claim 1 further comprising a block as an inertial mass operatively associated with the one or more sensors.

9. (Original claim) The apparatus of claim 1, wherein the one or more sensors are accelerometers.

10. (Original claim) The apparatus of claim 9, wherein the one or more accelerometer sensors are three accelerometers disposed to provide three orthogonal axes of sensitivity.

11. (Original claim) The apparatus of claim 9, wherein the one or more accelerometers are MEMS accelerometers.

12. (Original claim) The apparatus of claim 1 further comprising a cap coupled to the housing, the cap having a feedthrough for providing conductor access to the one or more

seismic sensors.

13. (Original claim) The apparatus of claim 12, wherein the cap and housing are coupled to form a sealed sensor module.

14. (Original claim) The apparatus of claim 13, wherein the sealed sensor module is hermetically sealed.

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15. (Original claim) A seismic sensor module tolerant to high-g shock inputs comprising:

(a) a module case;

(b) a sensor assembly housed by the module case, wherein the sensor assembly includes an inertial mass and at least one seismic sensor coupled to the inertial mass; and

(c) at least one isolator coupled to the sensor assembly and the module case.

16. (Original claim) The seismic sensor module of claim 15, wherein the module case is adapted to provide a compressive force on the at least one isolator.

17. (Original claim) The sensor module of claim 15, wherein the at least one seismic sensor is a MEMS accelerometer.

18. (Original claim) The sensor module of claim 15, wherein the at least one isolator is disposed to provide isolation from the induced vibrations in at least one predetermined

direction.

19. (Original claim) The sensor module of claim 18, wherein the at least one predetermined direction further comprises directions along three translational axes and three angular axes.

20. (Original claim) The sensor module of claim 15, wherein the at least one isolator further comprises a layer of silicone rubber.

21. (Original claim) The sensor module of claim 15, wherein the at least one isolator further comprises a layer of polyurethane foam.

22. (Original claim) The sensor module of claim 15, wherein the at least one isolator further comprises a first layer of silicone rubber and a second layer of polyurethane foam.

23. (Original claim) The sensor module of claim 17, wherein the at least one MEMS accelerometer further comprises three MEMS accelerometers disposed to provide three orthogonal axes of sensitivity.

24. (Original claim) The sensor module of claim 15 further comprising a cap coupled to the module case, the cap having a feedthrough for providing conductor access to the one or more seismic sensors.

25. (Original claim) The sensor module of claim 24, wherein the cap and module case are sealed.

26. (Original claim) The sensor module of claim 25, wherein the sealed sensor module is hermetically sealed.

27. (Currently Amended) A seismic sensor module comprising:

(a) a module case; ~~and~~

(b) a sensor assembly coupled to the module case, the sensor assembly including one or more MEMS accelerometer seismic sensors; and

(c) an inertial mass coupled to the sensor assembly for providing noise reduction in the sensor module.

28. (Original claim) The seismic sensor module of claim 27, wherein the inertial mass is a block of metal.

29. (Cancelled)

30. (Currently amended)The seismic sensor module of claim ~~29~~ 27, wherein the one or more accelerometers are three accelerometers disposed to provide three orthogonal axes of sensitivity.

31. (Cancelled)

32. (Original claim) The sensor module of claim 27 further comprising a cap coupled to the module case, the cap having a feedthrough for providing conductor access to the one or more seismic sensors.

33. (Original claim) The sensor module of claim 32, wherein the cap and module case are sealed.

34. (Original claim) The seismic sensor module of claim 33, wherein the sealed sensor module is hermetically sealed.

35. (Original claim) A sensor module tolerant to high-g shock inputs comprising:

(a) a module case;

(b) a sensor assembly within the module case, the sensor assembly having an inertial mass coupled to the module case and at one or more seismic sensors coupled to the inertial mass; and

(c) an isolation layer coupled to the module case and to the sensor assembly, wherein the sensor assembly does not move relative to the module case when an input force of less than a predetermined level is applied to the module case.

36. (Original claim) The sensor module of claim 35, wherein the predetermined level is 1g.

37. (Original claim) The sensor module of claim 35, wherein the at least one isolator is disposed to provide isolation from the induced vibrations in at least one predetermined direction.

38. (Original claim) The sensor module of claim 37, wherein the at least one predetermined direction further comprises directions along three translational axes and three angular axes.

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39. (Original claim) The sensor module of claim 35, wherein the at least one isolator further comprises a layer of silicone rubber.

40. (Original claim) The sensor module of claim 35, wherein the at least one isolator further comprises a layer of polyurethane foam.

41. (Original claim) The sensor module of claim 35, wherein the at least one isolator further comprises a layer of silicone rubber and a layer of polyurethane foam.

42. (Original claim) The sensor module of claim 35, wherein the one or more sensors are accelerometers.

43. (Original claim) The sensor module of claim 35, wherein the one or more sensors are three accelerometers disposed to provide three orthogonal axes of sensitivity.

44. (Original claim) The sensor module of claim 35, wherein the one or more sensors are MEMS accelerometers.

45. (Original claim) The sensor module of claim 35 further comprising a cap coupled to the module case, the cap having a feedthrough for providing conductor access to the one or more seismic sensors.

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46. (Original claim) The sensor module of claim 45, wherein the cap and module case are sealed.

47. (Original claim) The sensor module of claim 46, wherein the sealed sensor module is hermetically sealed.

48. (Original claim) A method of isolating one or more seismic sensor in a seismic sensor module from high-g shock loads while maintaining sensitivity to seismic waves, the method comprising:

(a) providing a housing for the seismic sensor assembly;

(b) installing one or more seismic sensors in the housing;

(c) providing at least one isolator between the one or more sensors and the housing.

49. (Original claim) The method of claim 48 further comprising coupling an inertial mass to the one or more seismic sensors.

50. (Original claim) The method of claim 48, wherein the at least one isolator is disposed to provide isolation from the induced vibrations in at least one predetermined direction.

51. (Original claim) The method of claim 50, wherein the at least one predetermined direction further comprises directions along three translational axes and three angular axes.

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52. (Original claim) The method of claim 48, wherein providing the at least one isolator further comprises providing a layer of silicone rubber.

53. (Original claim) The method of claim 48, wherein providing the at least one isolator further comprises providing a layer of polyurethane foam.

54. (Original claim) The method of claim 48, wherein providing the at least one isolator further comprises providing a layer of silicone rubber and a layer of polyurethane foam.

55. (Original claim) The method of claim 48 further comprising reducing noise during operation of the sensor module using an inertial mass coupled to the one or more sensors.

56. (Original claim) The method of claim 48, wherein the one or more sensors are accelerometers.